

**ECE TYPE-APPROVAL CERTIFICATE**

Communication concerning approval granted of  
a type of device pursuant to  
Regulation No. 7.



Approval No: **E24 7R-020273**

Extension No: *N/A*

Reason for extension:

- *N/A*

1. Trade name or mark of the device: ***NOREP or SafeRoad or SNV or Togood***
2. Manufacturer's name for the type of device: ***ST14 SIGNAL***  
Version(s): ***N/A***
3. Manufacturer's name and address: ***Ningbo Sinovat Auto Parts Co., Ltd.  
No.52 Zhengxing West Road, Yuyao City,  
Ningbo, Zhejiang Province,  
P.R. China***
4. If applicable, name and address of manufacturer's representative: ***N/A***
5. Submitted for approval on: ***16.11.2015***
6. Technical service responsible for conducting approval tests: ***TÜV Rheinland Kraftfahrt GmbH  
Technologiezentrum Verkehrssicherheit  
Am Grauen Stein  
D-51105 Köln (Poll)***
7. Date of test report issued by that service: ***12.11.2015***
8. Number of report issued by that service: ***87-R7-1871/15-00***



9. Concise description:

9.1 By Category of lamps:

For mounting either outside or inside or both:

Colour of light emitted (red/selective yellow/white):

Number, category and kind of light source:

Voltage and wattage:

Light source module specific identification code:

Geometric conditions of installation and relating variations (if any):

Only for limited mounting height of equal to or less than 750 mm above the ground (yes/no):

Application of an electronic light source control gear/variable intensity control

(a) being part of the lamp (yes/no):

(b) being not part of the lamp (yes/no):

Input voltage(s) supplied by an electronic light source control gear/variable intensity control:

**Rear position lamp: R1**  
**Stop Lamp: S1**

**Outside.**

**Red.**

**Rear position lamp: 9, LEDs, non replaceable light sources**  
**Stop lamp: 9, LEDs, non replaceable light sources**

**Rear position lamp: 12V, 0.2W**  
**Stop lamp: 12V, 1.8W**

**N/A**

**See manufacturer's information folder for details.**

**No.**

**N/A**

**N/A**

**N/A**



- Electronic light source control gear/variable intensity control manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body): *N/A*
- Variable luminous intensity (~~yes~~/no): *No.*
- 9.2 Function(s) produced by an interdependent lamp forming part of an interdependent lamp system: *No.*
10. Position of the approval mark: *On the lens.*
11. Reason(s) for extension (if applicable): *N/A*
12. Approval granted/~~extended~~/~~refused~~/~~withdrawn~~: *Granted.*
13. Place: *Dublin.*
14. Date: *26<sup>th</sup> November, 2015.*
15. Signature: 

16. The list of documents deposited with the Administrative Service which has granted approval, is annexed and may be obtained on request.

**Remarks:** This approval of a rear position lamp and stop lamp as part of a lamp device containing:

Rear direction indicator: E24 6R-010273  
Rear fog lamp: E24 38R-000273  
Reversing lamp: E24 23R-00273



## **Index to the Information Package**

Date of issue:	<i>26<sup>th</sup> November, 2015.</i>
Date of latest amendment:	<i>N/A</i>
Reason for extension/revision:	<i>N/A</i>
1. Additional conditions, and advisory notes on legal alternatives.	
2. Test report(s)	
- numbers(s):	<i>87-R7-1871/15-00</i>
- date of issue:	<i>12.11.2015</i>
- date of latest amendment:	<i>N/A</i>
3. Information document	
- number(s):	<i>ST14 SIGNAL-00</i>
- date of issue:	<i>06.11.2015</i>
- date of latest amendment:	<i>N/A</i>
Documentation:	<i>16 pages</i>



Appendix: **Additional conditions, and advisory notes on legal alternatives.**

A: Additional conditions:

1. The device, Type ST14 SIGNAL shall be marked as prescribed in the regulation.
2. The attached technical report, with any of its attachments, forms part of this Type Approval certificate.
3. Each individual product from series production shall be to the measurements specified in the attached drawings, and shall be manufactured only from the materials specified in the Approval documents.
4. Changes in the product are permitted only with the explicit permission of NSAI. Breaches of this requirement will lead to a withdrawal of the Type Approval, and in addition may be subject to criminal prosecution.
5. This Type Approval will expire when it is surrendered by the holder, or withdrawn by NSAI, or when the approved type of product no longer conforms to legal requirements. The recall of the Type Approval can be issued by NSAI when the conditions required for the issuing or continuation of the Type Approval are no longer current, or when the Approval holder is in breach of the duties attached to the Type Approval, or when it is established that the approved type no longer meets the requirements of traffic safety.
6. NSAI may at any time check the correct performance of the duties imposed by the grant of this Type Approval, and in order to do so, may make tests, or have tests made.
7. Changes in the company name, address or manufacturing site, as well as in any of the sales or other agents specified in the issuing of the approval must immediately be notified to the NSAI.
8. The duties imposed by the issuing of this certificate are not transferable. The legal protection of third parties is not affected by this certificate.
9. When the manufacture or sale of the vehicle, system, component or separate technical unit has not been started within one year of the date of issue of this certificate, then NSAI is to be informed. This requirement also applies when the manufacture or sale has been halted for more than one year, or when it ought to have been halted for more than one year. The initial commencement of manufacture or sale, or the resumption of manufacture or sale, shall then be notified to NSAI within one month of commencement or resumption.

B : Legal Options

Any objection to the requirements set out in this certificate shall be made within one month of the date of issue. The objection shall be made, in writing, to NSAI in Dublin.



Manufacturer : Ningbo Sinovat Auto Parts Co., Ltd.  
Type : ST14 SIGNAL

## TEST REPORT

according to ECE-Regulation

**Uniform provisions concerning the approval of front and rear position (side) lamps, stop-lamps and end-outline marker lamps for power-driven vehicles and their trailers**

### ECE-R7

including all amendments until  
**series of Amendments: 02**  
**Supplement 23**

Previously granted	
ECE - certificate	: ---

Structure of report:

0. general information
1. Test object(s) and general test information
2. Test minutes
3. Remarks concerning tested object(s)
4. Appendices
5. Statement of conformity

The Test Report shall be reproduced and published in full by the client only. It shall however be reproduced partially with the written permission of the Testing Laboratory only.



**Manufacturer** : Ningbo Sinovat Auto Parts Co., Ltd.  
**Type** : ST14 SIGNAL

**0. General information**

- 0.1. Trademark or trade name of the lamp : NOREP or SafeRoad or SNV or Togood
- 0.2. Manufacturer’s name for the type of the lamp : ST14 SIGNAL
- 0.3. Name and address of the manufacturer : Ningbo Sinovat Auto Parts Co., Ltd.  
 No.52 Zhengxing West Road, Yuyao City,  
 Ningbo, Zhejiang Province,  
 P.R. China
- 0.4. Name and address of manufacturer’s authorized representative : ---
- 0.5. No. of information folder : ST14 SIGNAL-00  
 date of issue : November 6, 2015  
 date of last amendment : ---

**1. Test object(s) and general test information**

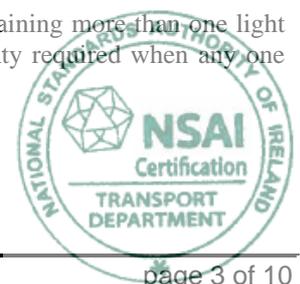
- 1.1. Test object(s)
  - Type : ST14 SIGNAL
  - Version : ---
  - Remark : rear position and stop lamp:  
 9LEDs, non-replaceable light sources  
 rear position lamp is reciprocally incorporated with stop lamp
- 1.2. General test information
  - 1.2.1. Order issued by (if different from manufacturer) : ---
  - 1.2.2. Test object / test vehicle received on : not applicable
  - 1.2.3. Test date : November 9, 2015
  - 1.2.4. Test site : Automotive Component Testing Center of Ningbo  
 No. 99, Jingu South Road, Yinzhou Investment &  
 Business Incubation, 315104, Ningbo,  
 P.R. China
  - 1.2.5. Remark : The results of the test refer exclusively to the object(s) mentioned under point 1.1 of this report.



Manufacturer : Ningbo Sinovat Auto Parts Co., Ltd.  
 Type : ST14 SIGNAL

2. Test minutes

- 2.1. Test facilities : The test facilities are in compliance with the requirements of the regulation.
- 2.2. Test results : ~~The type has been examined according to the amendments mentioned in appendix O.~~  
 An actual test of the type was not required. The results of the previous tests are still valid.
- Markings : The trade mark is marked clearly legible and indelible ~~on the lens and~~ on the housing of the lamp.  
 The rated voltage and wattage is clearly legible and indelible marked ~~on the lens and~~ on the housing of the lamp.  
 Space for the approval mark and for additional symbols is provided on the lens (the lens can not be separated from the housing).
- 2.3. General specifications : The lamps are designed and made that under normal use their satisfactory operation is ensured and they retain the required characteristics.  
 The colour of the light emitted is within the limits of the coordinates for RED as prescribed in Para.8 of the Regulation.
- 2.4. Photometric tests : The light intensity was measured after 1 minute burning period and after 30 minutes burning in reference axis. The distribution of the light intensity after 1 minute burning period was calculated using the ratio of the two described measurements. The light intensity and its distribution are in compliance with the requirement after 1 minute burning period and after 30 minutes burning period.  
 The light distribution angles and levels of intensity have been measured in accordance with Annex 4 of the Regulation, based on the manufacturer's indication of the centre of reference and axis of reference.  
 The rear position lamp is reciprocally incorporated with the stop lamp. The ratio between the luminous intensities of the two lamps when turned on simultaneously and the intensity of the position lamp when turned on alone is greater than 5:1 in the field required.  
 The stop lamp and rear position lamp containing more than one light source complies with the minimum intensity required when any one light source has failed.



Manufacturer : Ningbo Sinovat Auto Parts Co., Ltd.  
 Type : ST14 SIGNAL

## Results of photometric tests of the rear position lamp, category R1

measured after 1 minute burning period when all light sources lit

	light intensity of the lamps in reference axis [cd]	allowable maximum	required minimum
sample no. 1	10.89	17	4
sample no. 2	11.32	17	4

measured after 30 minutes burning period when all light sources lit

distribution of the intensity of the lamps in [cd]								
horizontal angle		L20°	L10°	L5°	V	R5°	R10°	R20°
vertical angle required minimum intensity	U10°	-	-	0.8	-	0.8	-	-
	U5°	0.4	0.8	-	2.8	-	0.8	0.4
	H	-	1.4	3.6	4	3.6	1.4	-
	D5°	0.4	0.8	-	2.8	-	0.8	0.4
	D10°	-	-	0.8	-	0.8	-	-
vertical angle sample no. 1	U10°	-	-	4.802	-	7.901	-	-
	U5°	1.423	4.206	-	9.890	-	7.480	6.560
	H	-	4.957	9.088	9.350	8.970	8.540	-
	D5°	1.450	4.443	-	9.995	-	6.642	3.214
	D10°	-	-	5.694	-	5.824	-	-
vertical angle sample no. 2	U10°	-	-	4.753	-	6.511	-	-
	U5°	1.970	4.439	-	11.67	-	6.219	6.810
	H	-	5.283	10.54	10.68	8.360	9.520	-
	D5°	2.057	5.117	-	11.98	-	6.405	2.529
	D10°	-	-	7.760	-	5.235	-	-

	sample no. 1	sample no. 2	allowable maximum	required minimum
maximum intensity [cd]	11.10	12.33	17	4
If incorporated with a stop lamp maximum intensity [cd] below a plane forming 5° with and downward from a horizontal plane	10.19	12.03	60	--
minimum intensity in the fields defined in Annex 1 of the Regulation [cd]	0.070	0.058	--	--



Manufacturer : Ningbo Sinovat Auto Parts Co., Ltd.  
 Type : ST14 SIGNAL

Results of photometric tests of the **stop lamp, category S1**

measured after **1 minute** burning period when all light sources lit

	light intensity of the lamps in reference axis [cd]	allowable maximum	required minimum
sample no. 1	179.3	260	60
sample no. 2	171.3	260	60

measured after **30 minutes** burning period when all light sources lit

distribution of the intensity of the lamps in [cd]								
horizontal angle		L20°	L10°	L5°	V	R5°	R10°	R20°
vertical angle required minimum intensity	U10°	-	-	12	-	12	-	-
	U5°	6	12	-	42	--	12	6
	H	-	21	54	60	54	21	-
	D5°	6	12	-	42	-	12	6
	D10°	-	-	12	-	12	-	-
vertical angle sample no. 1	U10°	-	-	48.42	-	81.42	-	-
	U5°	16.16	42.70	-	119.7	-	72.94	30.28
	H	-	55.42	96.10	170.4	148.1	109.4	-
	D5°	16.59	54.14	-	99.45	-	65.29	30.19
	D10°	-	-	60.52	-	57.18	-	-
vertical angle sample no. 2	U10°	-	-	49.10	-	65.92	-	-
	U5°	20.23	46.00	-	125.5	-	63.64	23.39
	H	-	66.55	113.9	168.7	133.7	101.4	-
	D5°	22.14	56.81	-	134.2	-	68.55	25.22
	D10°	-	-	89.36	-	55.59	-	-

	sample no. 1	sample no. 2	allowable maximum	required minimum
maximum intensity [cd]	174.3	169.1	260	60
minimum intensity in the fields defined in Annex 1 of the Regulation [cd]	0.742	0.605	--	



Manufacturer : Ningbo Sinovat Auto Parts Co., Ltd.  
 Type : ST14 SIGNAL

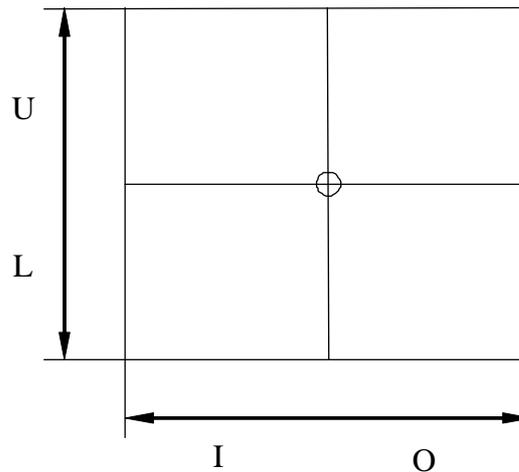
2.5. Colour test : The CIE trichromatic coordinates of the light emitted by lamp are within the limits for white prescribed in the paragraph 2.29. of the Regulation No.48.

Chromatic coordinates	Reference axis			
	Rear position lamp		Stop lamp	
	no. 1	no. 2	no. 1	no. 2
x	0.6974	0.6966	0.6913	0.6918
y	0.3011	0.3019	0.3069	0.3072

2.6. Illuminating surface : Vertical and horizontal outlines of the illuminating surface of the light-signalling device in relation to the centre of reference and in accordance with Annex 3 of the Regulation No. 48

Definition of the illuminating surface of the device

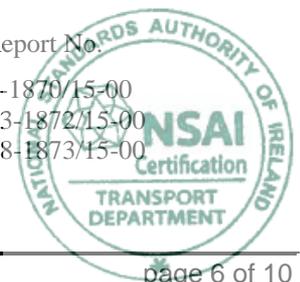
⊕ centre of reference



function	upper boundary (U) [mm]	lower boundary (L) [mm]	inner boundary (I) [mm]	outer boundary (O) [mm]
rear position and stop lamp	23	32	19	18

2.7. Explanatory note : This report describes the examination of the rear position and stop lamp as a part of a lamp device. For the examination of the other lamp of the device, refer to the following report:

Type of lamp	Test Report No.
Rear direction indicator	87-R6-1870/15-00
Reversing lamp	87-R23-1872/15-00
Rear fog lamp	87-R38-1873/15-00



Manufacturer : Ningbo Sinovat Auto Parts Co., Ltd.  
Type : ST14 SIGNAL

### 3. Remark concerning tested object(s)

All versions of the lamps as stated in the information document are covered with the tested version(s) and test object(s) respectively.

### 4. Appendices

- L Technical information about the lamp type according to Annex 2
- 0 List of modifications
- 1 Information folder no. : ST14 SIGNAL-00

### 5. Statement of conformity

The above mentioned information folder and the type described in that comply with the requirements mentioned on page 1.

Engineering Centre Shanghai, November 12, 2015  
HH



Heng Huang  
Expert Technical Service



Manufacturer : Ningbo Sinovat Auto Parts Co., Ltd.  
 Type : ST14 SIGNAL

Technical information about the lamp type according to Annex 2 for the communication of the ECE-type approval

Appendix L

- 1. Trade name or mark of the device : NOREP or SafeRoad or SNV or Togood
- 2. Manufacturer's name for the type of device : ST14 SIGNAL
- 3. Manufacturer's name and address : Ningbo Sinovat Auto Parts Co., Ltd.  
 No.52 Zhengxing West Road, Yuyao City,  
 Ningbo, Zhejiang Province,  
 P.R. China
- 4. If applicable, name and address of the manufacturer's representative : ---
- 5. Submitted for approval on : November 6, 2015
- 6. Technical service responsible for conducting approval tests : TÜV Rheinland Kraftfahrt GmbH  
 Technologiezentrum Verkehrssicherheit  
 Am Grauen Stein  
 D-51105 Köln (Poll)
- 7. Date of report issued by that service : November 12, 2015
- 8. Number of report issued by that service : 87-R7-1871/15-00
- 9. Concise description
- 9.1 By category of lamp : rear position and stop lamp: R1-S1
- For mounting either outside or inside or both : outside / ~~inside~~ / ~~both~~ <sup>(1)</sup>
- Colour of light emitted : red / ~~white~~ <sup>(1)</sup>
- Number, category and kind of light source(s) : rear position and stop lamp: 9LEDs, non-replaceable light sources
- Voltage and wattage : 12V, 0.2W/1.8W
- Light source module specific identification code : not applicable
- Only for limited mounting height of equal to or less than 750 mm above the ground : ~~yes~~/no <sup>(1)</sup>
- Geometrical conditions of installation and relating variations, if any : see information folder for details
- Application of an electronic light source control gear/variable intensity control : not applicable
- (a) being part of the lamp : ~~yes~~/no <sup>(1)</sup>
- (b) being not part of the lamp : ~~yes~~/no <sup>(1)</sup>
- Input voltage(s) supplied by an electronic light source control gear/variable intensity control : not applicable



**Manufacturer** : Ningbo Sinovat Auto Parts Co., Ltd.  
**Type** : ST14 SIGNAL

Electronic light source control gear/variable : not applicable  
 intensity control manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body)

Variable luminous intensity : ~~yes~~/no <sup>(1)</sup>

9.2 Function(s) produced by an interdependent lamp forming part of an interdependent lamp system

Front position lamp : ~~yes~~/no <sup>(1)</sup>

R1 Rear position lamp : ~~yes~~/no <sup>(1)</sup>

R2 Rear position lamp : ~~yes~~/no <sup>(1)</sup>

S1 Stop lamp : ~~yes~~/no <sup>(1)</sup>

S2 Stop lamp : ~~yes~~/no <sup>(1)</sup>

S3 Stop lamp : ~~yes~~/no <sup>(1)</sup>

S4 Stop lamp : ~~yes~~/no <sup>(1)</sup>

End-outline marker lamp : ~~yes~~/no <sup>(1)</sup>

10. Position of the approval mark : on the lens

11. Reason(s) for extension (if applicable) : ---





Manufacturer : Ningbo Sinovat Auto Parts Co., Ltd.  
Type : ST14 SIGNAL

List of modifications

Appendix 0

Correction of : ---

Modification of : ---

Addition of : ---

Deletion of : ---



Application date : November 6, 2015

### 1. Specification data

Type	ST14 SIGNAL				
Function	Rear Direction Indicator	Rear Position Lamp	Stop Lamp	Reversing Lamp	Rear Fog Lamp
Emitted color	Amber	Red	Red	White	Red
Rated	Voltage	12V			
	Wattage	1.8W	0.2W	1.8W	1.1W 2.4W
Applicable Regulation (ECE)	R6.01 Category 2a	R7.02 Category R1-S1		R23.00 Category AR	R38.00 Category F1
Number and category of filament lamp(light source)	Non-replaceable light source				
	9LEDs	9LEDs		8LEDs	15LEDs
Location of marking	Rated Voltage and Wattage	Marked on Housing			
	Trade mark	NOREP or SafeRoad or SNV or Togood		Marked on Housing	
	Approval mark	Marked on Lens			
Special supply voltage	Not applicable				
Application of additional supply system	Yes/ No				
Light source module	Yes/ No				

### 2. Construction and material

Construction	Material	Remarks
Outer lens	PC	Clear
Reflector	ABS	Aluminum Coating
Housing	ABS	---
Bezel	ABS	---
Electrical wiring	Copper covered with insulation	---

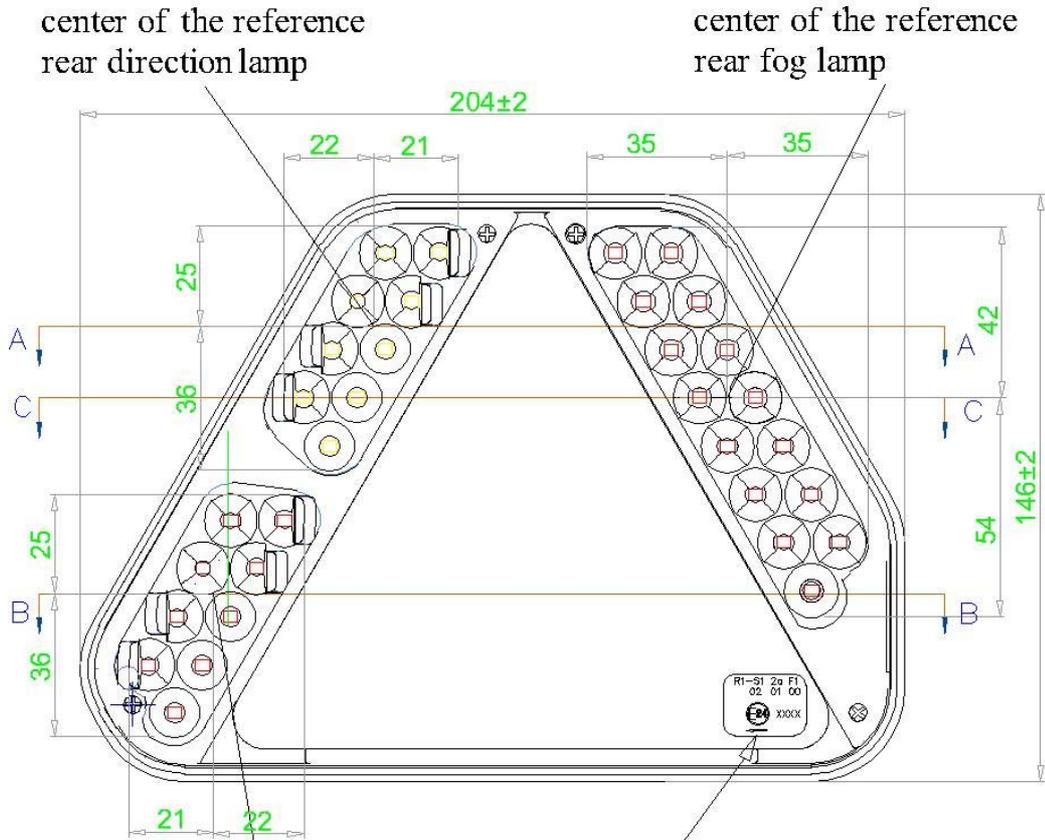
3. Name and address of manufacturer : Ningbo Sinovat Auto Parts Co., Ltd.  
No.52 Zhengxing West Road, Yuyao City,  
Ningbo, Zhejiang Province  
P.R. China

4. Name and address of representative of manufacturer : Not applicable

This information document consists of 6 pages.

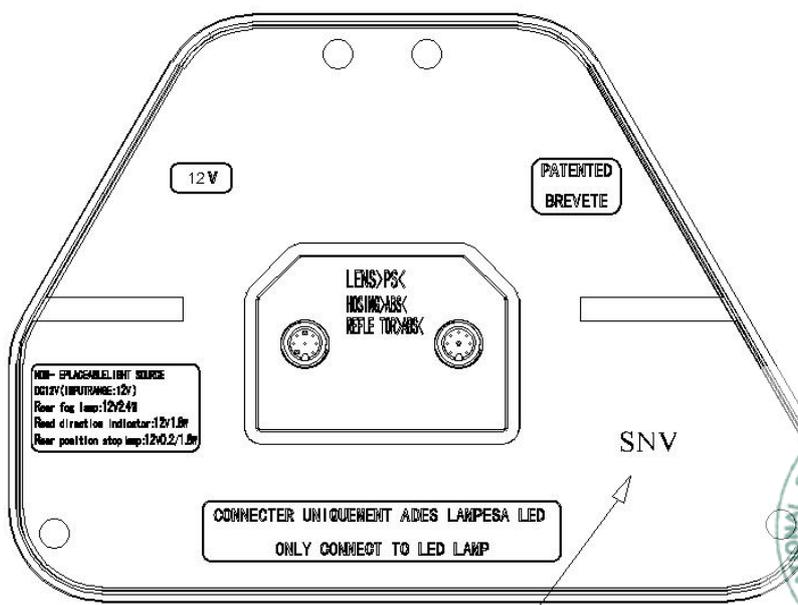


NOTE: THIS DRAWING SHALL BE APPLIED FOR LEFT HAND DEVICE FOR RIGHT-HAND TRAFFIC VEHICLE, AND RIGHT HAND DEVICE FOR LEFT-HAND TRAFFIC VEHICLE SHALL BE SYMMETRIC EXCEPT FOR MARKINGS.



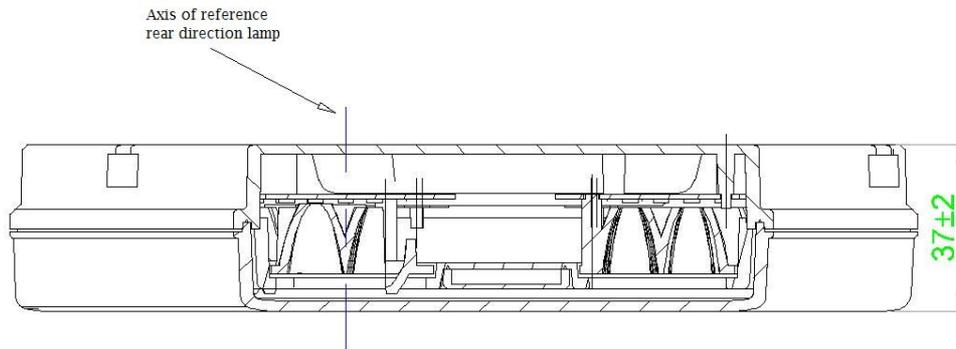
center of the reference rear position and stop lamp

R1-S1 2a F1  
02 01 00

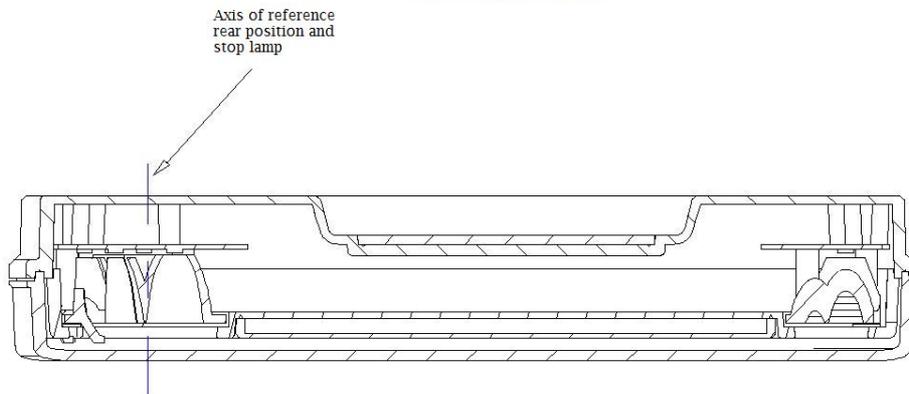


Trade Mark

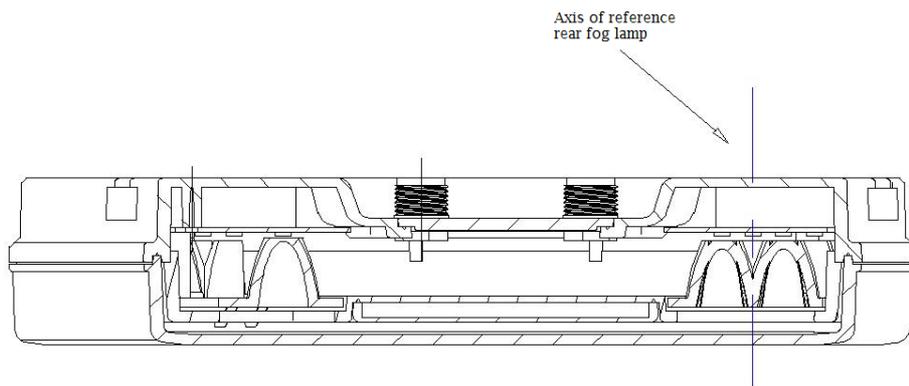




SECTION A-A



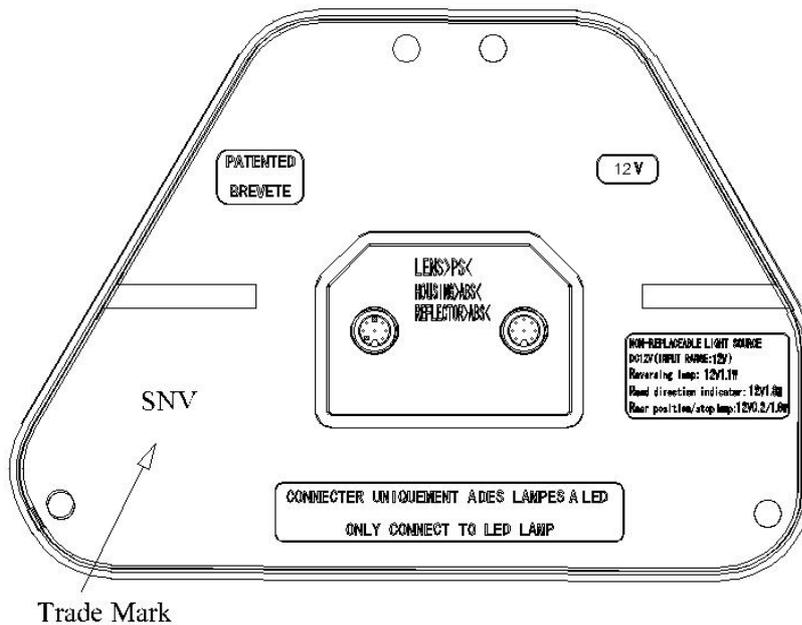
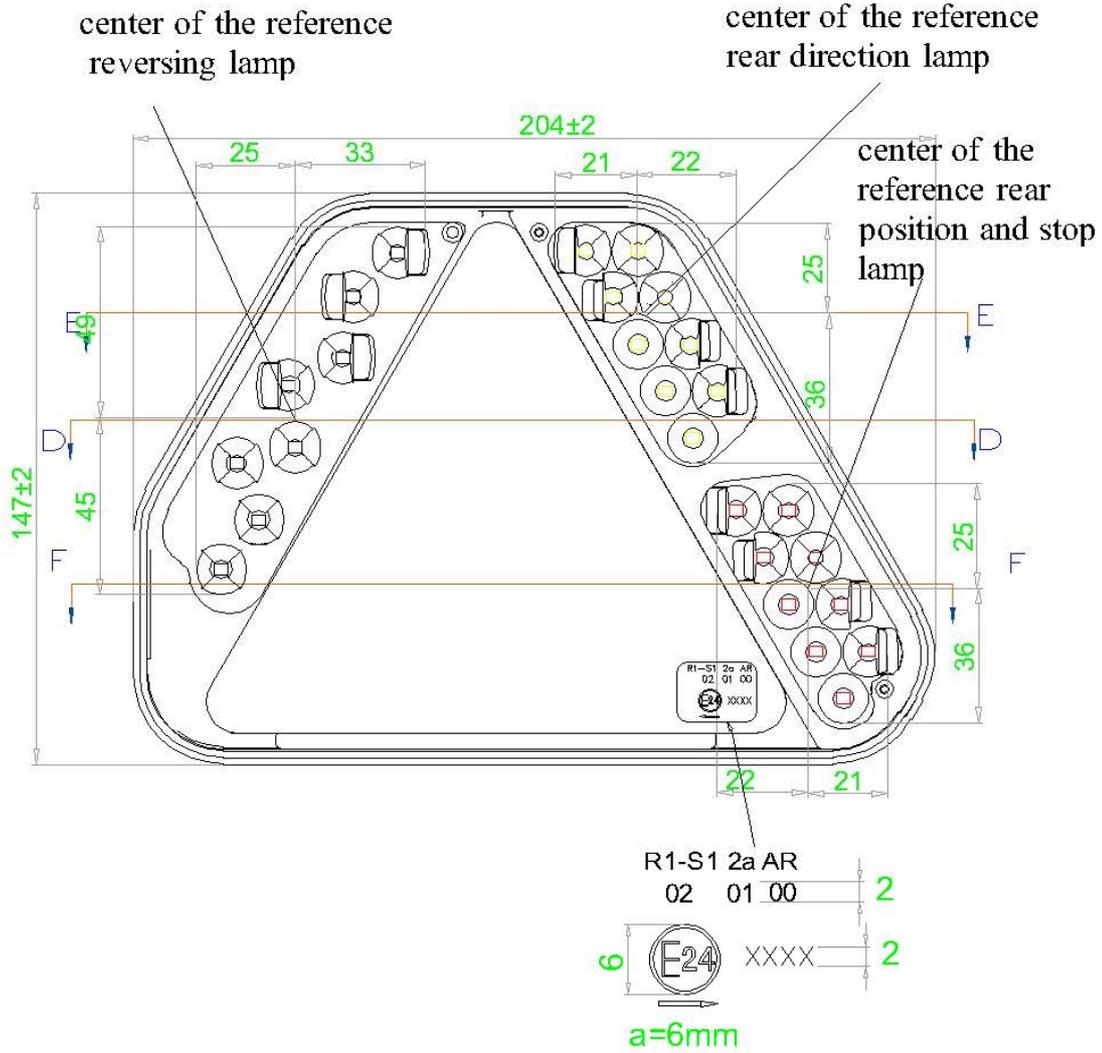
SECTION B-B

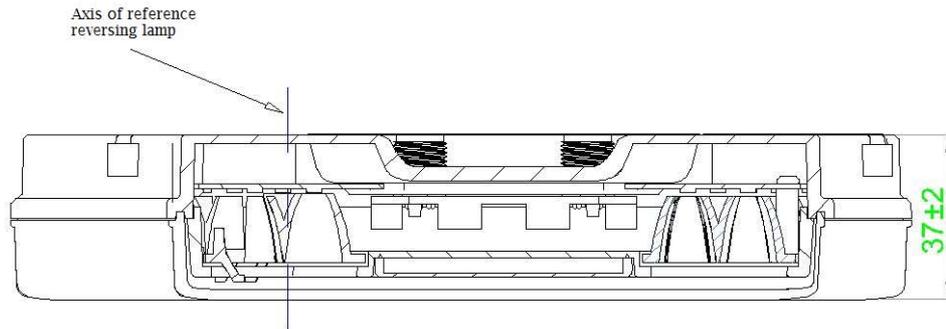


SECTION C-C

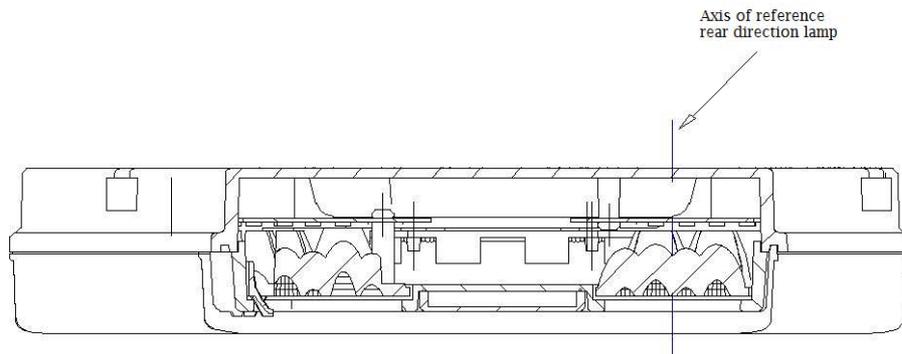


NOTE: THIS DRAWING SHALL BE APPLIED FOR RIGHT HAND DEVICE FOR RIGHT-HAND TRAFFIC VEHICLE, AND LEFT HAND DEVICE FOR LEFT-HAND TRAFFIC VEHICLE SHALL BE SYMMETRIC EXCEPT FOR MARKINGS.

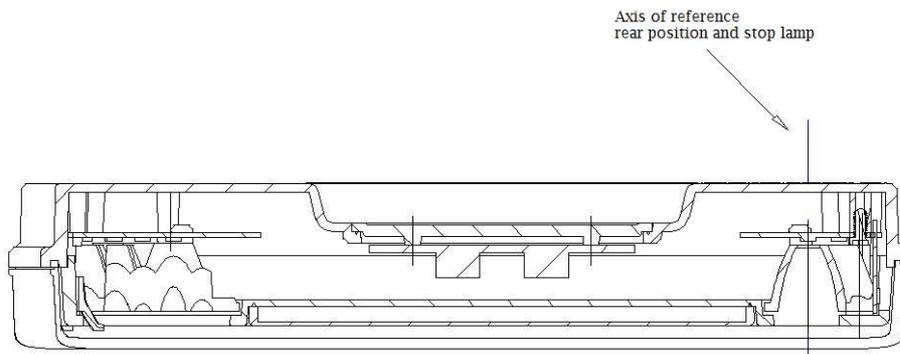




SECTION D-D



SECTION E-E



SECTION F-F

Non-replaceable light source  
 DC 12V  
 Rear direction indicator: 12V 1.8W  
 Rear position/ stop lamp: 12V 0.2/1.8W  
 Reversing lamp: 12V 1.1W  
 Rear fog lamp: 12V 2.4W



### CIRCUIT DIAGRAM

